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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/272,809	03/19/1999	JOHN CLARK LAGARIAS	23070-943	6118
22434	7590	10/19/2006	EXAMINER	
BEYER WEAVER & THOMAS, LLP			HINES, JANA A	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	
			1645	

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/272,809	<b>Applicant(s)</b> LAGARIAS, JOHN CLARK	
	<b>Examiner</b> Ja-Na Hines	<b>Art Unit</b> 1645	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-19 and 21-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Amendment Entry***

1. The amendment filed August 2, 2006 has been entered. Claims 2, 6, and 20-21 have been cancelled. Claims 1, 3-5, 8-9, 17, and 22-26 have been amended. Claims 1, 3-5, 7-19 and 22-32 are under consideration in this office action.

### ***Withdrawal of Objections and Rejections***

2. The following objections and rejections have been withdrawn in applicants' amendments and arguments:

- a) The objection of claim 24;
- b) The rejection of claims 1, 3-5 under 35 U.S.C. 102(b) as being anticipated by Clack et al;
- c) The rejection of claims 1, 3-4 and 7-8 under 35 U.S.C. 102(b) as being anticipated by Kaneko et al;
- d) The rejection of claims 1,7 and 9-11 under 35 U.S.C. 102(b) as being anticipated by Yeh et al;
- e) The rejection of claims 12-16 under 35 U.S.C. 103(a) as being unpatentable over Yeh et al., in view of Stryer et al., (US Patent 4,859,582);
- f) The rejection of claims 17-19, 22-23, 25, 27-32 under 35 U.S.C. 103(a) as being unpatentable over Stryer et al., (US Patent 4,859,582) in view of Yeh et al;
- g) The rejection of claim 24 under 35 U.S.C. 103(a) as being unpatentable over Stryer et al., (US Patent 4,859,582) and Yeh et al., further in view of Clack et al; and
- h) The rejection of claim 26 under 35 U.S.C. 103(a) as being unpatentable over Stryer et al., (US Patent 4,859,582) and Yeh et al., further in view of Kaneko et al.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 3-5, 7-19 and 22-32 have been considered but are moot in view of the new ground(s) of rejection.

***New Grounds of Objection and Rejection***

***Claim Objections***

4. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Dependant claim 8 does not further limit claim 1. The polypeptide of claim 1 can consist of between about 190 and 400 amino acids, but the amino acid sequence of SEQ ID NO:2 has 1276 amino acids. Therefore, clarification is required to overcome the objection.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1, 3-5, 7-19 and 22-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

The claims are drawn to a composition comprising: an apophytochrome polypeptide consisting of between about 190 amino acids and about 400 amino acids, which apophytochrome polypeptide comprises a lyase domain, wherein said apoprotein polypeptide is selected from the group consisting of a plant apophytochrome polypeptide, an algal apophytochrome polypeptide, and a cyanobacterial apophytochrome polypeptide; and a bilin.

Neither the specification nor originally presented claims provides support for an apophytochrome polypeptide consisting of between about 190 amino acids and about 400 amino acids.

Applicant did not point to support in the specification for a composition comprising an apophytochrome polypeptide consisting of between about 190 amino acids and about 400 amino acids, where the apophytochrome polypeptide comprises a lyase domain, and is selected from the group consisting of a plant apophytochrome polypeptide, an algal apophytochrome polypeptide, and a cyanobacterial apophytochrome polypeptide; and a bilin. Moreover, applicants failed to specifically point to the identity or provide structural characteristics of the instantly recited

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composition. Furthermore, applicant failed to specifically point to the identity or provide structural characteristics of an apophytochrome polypeptide consisting of between about 190 amino acids and about 400 amino acids. Thus, there appears to be no teaching of the newly recited composition. Applicant has pointed to page 4, line 25 of the instant specification and the claims for support of the amendment, however it appears that the specification states that the aprotein can be an apophytochrome or analogue. There is no teaching of an apophytochrome polypeptide consisting of between about 190 amino acids and about 400 amino acids, and having the recited characteristics of having a lyase domain, and being selected from the recited polypeptide group. There is no teaching of a composition having the recited apophytochrome polypeptide and a bilin. Therefore, it appears that there is no support in the specification. Thus, applicants must specifically point to page and line number support for the identity a composition comprising an apophytochrome polypeptide consisting of between about 190 amino acids and about 400 amino acids, where the apophytochrome polypeptide comprises a lyase domain, and is selected from the group consisting of a plant apophytochrome polypeptide, an algal apophytochrome polypeptide, and a cyanobacterial apophytochrome polypeptide; and a bilin as recited by the amendments. Therefore, the claims incorporate new matter and are accordingly rejected.

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6. Claims 1, 3-5, 7-19 and 22-32 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1 recites the limitation "said apoprotein polypeptide". There is insufficient antecedent basis for this limitation in the claim.

### **Conclusion**

7. No claims allowed.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ja-Na Hines whose telephone number is 571-272-0859. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, A. Mark Navarro can be reached on 571-272-0861. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ja-Na Hines  
October 13, 2006

